

CLAIMS

1. A piston for an internal combustion engine, the engine having a connecting rod coupled to a wristpin, the piston comprising:

5 a skirt having a top portion and a cylindrically-shaped wall portion extending from the top portion, the top and wall portions defining a skirt cavity, the top portion having an upper surface and an opposite lower surface within the skirt cavity, the lower surface configured to define a bearing surface for the wristpin; and

10 a crown coupled to the skirt, the crown having a lower surface in facing relation to the upper surface of the skirt, the lower surface of the crown and the upper surface of the skirt defining a lubrication cavity,

wherein the top portion of the skirt includes at least one inlet hole communicating between the skirt cavity and the lubrication cavity and adapted to supply a lubricant from the skirt cavity to the lubrication cavity, and wherein the top portion  
15 includes at least one lubrication hole communicating between the lubrication cavity and the skirt cavity and adapted to supply the lubricant from the lubrication cavity to the bearing surface and the wristpin.

2. The piston of claim 1, wherein the lubrication cavity is an annular cavity,  
20 and wherein the lower surface of the crown and the upper surface of the skirt define a central cavity centrally-located within the annular cavity, the central cavity communicating with the annular cavity through at least one bypass hole, and wherein the top portion includes at least one central lubrication hole communicating between the central cavity and the skirt cavity and adapted to lubricate a central portion of the wristpin.

25 3. The piston of claim 2, wherein the at least one bypass hole includes two bypass holes.

30 4. The piston of claim 2, wherein the central cavity includes internal threads, and wherein one of the crown or the top portion includes a threaded boss, and wherein the crown is coupled to the skirt by threadingly engaging the threaded boss with the internal threads.

5. The piston of claim 1, wherein the top portion includes at least one recess positioned within the lubrication cavity, and wherein at least one of the lubrication holes is located within the recess.

5 6. The piston of claim 1, wherein the top portion includes two recesses positioned within the lubrication cavity, and wherein at least one of the lubrication holes is located within each of the two recesses.

7. The piston of claim 1, wherein the at least one lubrication hole includes six  
10 lubrication holes.

8. The piston of claim 1, wherein at least one inlet hole includes two inlet holes.

9. A piston for an internal combustion engine, the engine having a connecting rod coupled to a wristpin, the piston comprising:

a skirt having a top portion and a cylindrically-shaped wall portion extending from the top portion, the top and wall portions defining a skirt cavity, the top portion having an upper surface; and

a crown coupled to the skirt, the crown having a lower surface in facing relation to the upper surface of the skirt, the lower surface of the crown and the upper surface of the skirt defining an annular cavity and a central cavity centrally-located within the annular cavity, the central cavity communicating with the annular cavity through at least one bypass hole,

wherein the top portion includes at least one inlet hole communicating between the skirt cavity and the annular cavity and adapted to supply a lubricant from the skirt cavity to the annular cavity, and wherein the top portion includes at least one lubrication hole communicating between the annular cavity and the skirt cavity and adapted to supply the lubricant from the annular cavity to the wristpin, and wherein the top portion includes at least one central lubrication hole communicating between the central cavity and the skirt cavity and adapted to lubricate a central portion of the wristpin.

10. The piston of claim 9, wherein the top portion includes a lower surface opposite to the upper surface of the skirt and within the skirt cavity, the lower surface configured to define a bearing surface for the wristpin.

11. The piston of claim 9, wherein the top portion includes at least one recess positioned within the annular cavity, and wherein at least one of the lubrication holes is located within the recess.

12. The piston of claim 9, wherein the top portion includes two recesses positioned within the annular cavity, and wherein at least one of the lubrication holes is located within each of the two recesses.

13. The piston of claim 9, wherein the at least one lubrication hole includes six lubrication holes.

14. The piston of claim 9, wherein the at least one bypass hole includes two bypass holes.

5 15. The piston of claim 9, wherein the central cavity includes internal threads, and wherein one of the crown or the top portion includes a threaded boss, and wherein the crown is coupled to the skirt by threadingly engaging the threaded boss with the internal threads.

10 16. The piston of claim 9, wherein at least one inlet hole includes two inlet holes.

17. A piston for an internal combustion engine, the engine having a connecting rod coupled to a wristpin, the piston comprising:

a skirt defining a skirt cavity including a bearing surface for the wristpin;

an uppermost surface partially defining a combustion chamber;

5 a lubrication cavity between the uppermost surface and the bearing surface;

at least one inlet hole communicating between the skirt cavity and the lubrication cavity and adapted to supply a lubricant from the skirt cavity to the lubrication cavity; and

10 at least one lubrication hole communicating between the lubrication cavity and the skirt cavity and adapted to supply the lubricant from the lubrication cavity to the bearing surface and the wristpin.

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